



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,095	03/06/2002	Brian Bates	8627-051	8504
<div>7590 02/02/2007 J. Matthew Buchanan BRINKS HOFER GILSON & LIONE P.O. Box 10395 Chicago, IL 60610</div>			<div>EXAMINER WEBB, SARAH K</div>	
			<div>ART UNIT 3731</div>	<div>PAPER NUMBER</div>
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/02/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/092,095

Applicant(s)

BATES, BRIAN

Examiner

Sarah K. Webb

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-50, 73 and 74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-50, 73 and 74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 40-48, 50, 73, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,080,191 to Summers in view of US Patent No. 6,245,100 to Davila et al., and further in view of US Patent No. 5,951,599 to McCrory.

Summers discloses several stent patterns in Figures 1-5 and 21 that meet many limitations of the claims. The embodiment of the stent in Figures 1-5 is formed from a single wire (column 3, line 65), has ring segments joined by curved regions, and adjacent rings are interleaved. The embodiment in Figure 21 has a longitudinal support and is formed from a flat sheet of material. Summers states that a graft material may be attached to any of the disclosed stent frames to seal an aneurysm (column 11, lines 25-52), but Summers fails to disclose the specific means of attaching the graft to the stent frame.

The limitation "secured to said support frame by folding one end of said graft material around one of said frame threads... and connecting two layers..." is a product by process limitation. Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. The prior art only needs to meet the structural requirements - the graft only needs to encapsulate the frame threads at the end of the stent and have an area of double thickness. Davila et al. discloses another stent-graft and teaches that it advantageous to fix a graft to a stent by folding the ends over the stent frame and attaching the layers to one another, as this attachment ensures that the

Art Unit: 3731

graft will not move relative to the stent during further assembly and implantation (column 9, lines 38-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the graft of Summers by folding the ends over the frame and bonding the layers together, as Davila teaches that this helps to prevent shifting of the graft during further assembly processes and delivery.

Summers and Davila fail to state that the graft material only covers a portion of the stent circumference. McCrory discloses another stent frame with a graft attached to it. As shown in Figure 2A, the graft (22) extends only a portion of the length and circumference of the frame. The graft extends *at least* $\frac{1}{4}$ of the circumference. The graft material is an impermeable polymer that is attached to the frame by various attachment means (column 4, lines 14-19) and is intended for sealing an aneurysm. McCrory teaches that this particular configuration of the graft material allows the blood to flow through the apertures of the stent except at the neck of the aneurysm, where thrombosis is desired (column 3, lines 1-22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a partial circumference graft on the modified Summers stent frame, as McCrory teaches that this configuration allows blood to flow through the stent frame apertures except at the site of the aneurysm sac. This configuration effectively seals the aneurysm without significantly affecting the flow of blood to other areas of the vessel.

2. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Summers in view of Davila and McCrory, as applied above, and further in view of US Patent App. Pub. No. 2003/0139802 (Wulfman et al.).

The modified Summers device fails to configure the partial circumference graft to extend the full length of the stent. Wulfman discloses another stent frame that

includes a graft (28) is disposed over *approximately* $\frac{1}{2}$ of the circumference of the frame (26). Similar to McCrory, the graft material (28) is also an impermeable polymer material that is attached to the frame by various attachment means (0033). Wulfman teaches that a partial circumference graft can extend the full length of the stent as an alternative to a partial length of the stent [0029]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the graft of the modified Summers device to extend the full length of the stent, as Wulfman teaches that this simple modification allows the device to be adapted for various types of vessel irregularities.

Response to Arguments

3. Applicant's arguments, see pages 2-5, filed 11/7/06, with respect to the rejection(s) of claim(s) 40-48,50 and 73-74 under Summers, McCrory, and Myers et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Summers, Davila et al. and McCrory.

4. Applicant argues that McCrory teaches away from a partial circumference graft in the embodiment of Figure 3A. This embodiment is NOT relied upon for the rejection, because it involves in vivo formation of a graft portion. The embodiment relied upon for the rejection is the embodiment of Figure 2A. Because the reference discloses in vivo formation of a graft does not mean that the reference teaches away from another disclosed embodiment. McCrory provides proper motivation for forming a partial circumference graft attached to a stent frame prior to deployment.

Art Unit: 3731

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah K. Webb whose telephone number is (571) 272-4706. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anh Tuan T. Nguyen can be reached on (571) 272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SKW
1/19/07

Julian W. Woo

**JULIAN W. WOO
PRIMARY EXAMINER**